

Application No.: 10/053,152
Reply to Office Action of October 22, 2003

Attorney Docket No.: FGTI-094AUS
(200-0459.1)

Amendments to the Claims are reflected in the listing of claims that begins on page 3 of this paper.

Remarks/Arguments begin on page 7 of this paper.

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-33 (cancelled)

34. (currently amended) A method for controlling an engine, comprising:
~~transferring electrical energy generated in a stator winding of a first plural phasor motor driving first electromechanical a cylinder exhaust valve during closing of said first cylinder valve to a stator winding of a second plural phasor motor electromechanical driving a second cylinder intake valve to open said second cylinder valve.~~

35. (currently amended) The method of claim 34 wherein said transferring step includes:

~~generating a current in said stator winding of the first electromechanical cylinder exhaust valve plural phasor motor while decelerating de-accelerating said first cylinder valve towards a closed position; and,~~

~~routing said current to stator winding of the second plural phasor motor said second electromechanical cylinder intake valve to induce said second cylinder valve to move towards an open position.~~

36. (currently amended) The method of claim 34 wherein said first and second cylinder valves communicate with first and second engine cylinders, respectively.

37. (currently amended) A method for controlling an engine, comprising:
~~transferring electrical energy generated in a stator winding of a first plural phasor~~

motor electromechanical cylinder exhaust valve, such motor having the rotor thereof coupled to a first cylinder valve, during closing of said first valve to a stator winding of a second plural phasor motor, such second plural phasor motor having a rotor thereof coupled to a second cylinder valve, such electrical energy being used by the first plural phasor motor prior to the transfer during closing of said first cylinder valve, such transferred energy being used by the second plural phase motor electromechanical cylinder exhaust valve to open said second cylinder valve.

38. (currently amended) A method for controlling an engine, comprising;

transferring electrical energy generated in a winding of a first plural phasor motor electromechanical cylinder intake valve during closing of a first cylinder intake valve driven by the first plural phasor motor said first valve to a winding of a second plural phasor motor second electromechanical cylinder intake valve to open a said second intake valve driven by the second plural phasor motor.

39. (currently amended) A method for controlling an engine, comprising

recirculating a current generated in a winding of a first plural phasor motor used to drive a electromechanical cylinder exhaust valve while decelerating de-accelerating said cylinder exhaust first valve towards a closed position to a winding of a second plural phasor motor electromechanical cylinder used to drive a cylinder intake valve to open said second cylinder intake valve.

40. (currently amended) A method for controlling an engine comprising:

recirculating a current generated in a winding of a first motor of a plural phasor motor electromechanical cylinder exhaust valve driving a first exhaust valve while decelerating de-accelerating said first exhaust first valve towards a closed position to a winding of a second plural phasor motor driving a electromechanical a second cylinder exhaust valve to open said second cylinder exhaust second valve.

41. (currently amended) A method for controlling an engine, comprising:

recirculating a current generated in a winding of a first plural phasor motor driving a electromechanical first cylinder intake valve while decelerating de-accelerating said cylinder first valve towards a closed position to winding of a second plural phase motor driving electromechanical a second cylinder intake valve to open said- second cylinder intake valve.

42. (currently amended) A method for controlling an engine comprising;

reversing a flow of current in a winding of a plural phasor motor first electromechanical valve communicating with a first engine cylinder valve when said first valve is being closed; and,

directing said current to a winding of a second plural phasor motor second electromechanical valve communicating with a second engine cylinder to induce said second valve to move towards an open position.

43. (currently amended) The method of claim 42 wherein said step of reversing said flow of current occurs when said first valve is being decelerated de-accelerated towards a closed position.

44. (previously presented) The method of claim 42 wherein said first valve is a cylinder exhaust valve and said second valve is a cylinder intake valve.

45. (previously presented) The method of claim 42 wherein said first valve is a cylinder exhaust valve and said second valve is a cylinder exhaust valve.

46. (previously presented) The method of claim 42 wherein said first valve is a cylinder intake valve and said second valve is a cylinder intake valve.

47. (currently amended) A method for controlling an engine, comprising:

generating a current in the first ball-screw valve assembly communicating with a first

engine cylinder while ~~decelerating~~ de-accelerating said first valve assembly towards a closed position; and,

directing said current to a second ball-screw valve assembly communicating with a second engine cylinder to induce said second valve assembly to move towards an open position.

48. (currently amended) A system for controlling valve operation in an engine, comprising:

a first control circuit coupled to a winding of a first plural phasor motor coupled to a electromechanical first valve, said first valve controlling fluid communication with a first engine cylinder; and,

a second circuit coupled to a winding of a plural phasor motor coupled to a second electromechanical valve, said second valve controlling fluid communication with a second engine cylinder, wherein a current generated in the winding of said first motor valve while ~~decelerating~~ de-accelerating said first valve towards a closed position is routed through said winding of said first control circuit to said winding of second control circuit to induce said second valve to move towards an open position.

49. (currently amended) The system of claim 48 wherein said first and second motors are coupled electromechanical valves are electrically actuated to first and second ball-screw valves, respectively.